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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,310	07/10/2001	David W. Albrecht	SJO920010016US1	8192
28722	7590	04/01/2004	EXAMINER	
BRACEWELL & PATTERSON, L.L.P.			AGUIRRECHEA, JAYDI A	
P.O. BOX 969			ART UNIT	
AUSTIN, TX 78767-0969			PAPER NUMBER	
			2834	

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/902,310

Applicant(s)

ALBRECHT ET AL.

Examiner

Jaydi A. Aguirrechea

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,8,15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 5 and 6 are objected to because of the following informalities: These claims recites the phrase “adapted to be”, the examiner suggests that this phrase be eliminated, since this is not a positive limitation in any patentable sense.
2. Claim 6 is objected to because of the following informalities: In the last line the word “in” is missing; the limitation should read, “the second gap is in the range of 200 to 300 microns. Appropriate correction is required.
3. Claim 12 is objected to because it is unclear to the Examiner how the rotating magnet induces a magnetic field. The magnets are permanent magnets, so there is a magnetic field already in there.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichiyama (US6549366).

Ichiyama discloses a spindle comprising a shaft **22**, a sleeve **26** being coaxial with the shaft, a first gap (Column 5, lines 7-8 and 10-11), a hub **24** bound to the sleeve, a second gap **25** and the hub being adapted to be secured to a rotor magnet (Column 5, lines 3-8). (See Figure 2)

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With regards to claim 4, Ichiyama discloses the gap being filled with air, a low permeable material.

6. Claims 12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6300695 to Neal (Neal).

Neal discloses a spindle structure having a stator **120**, a spindle assembly **110**, a shaft **116**, a fluid bearing gap **118** between the shaft and the sleeve, a hub **8**, a gap **160** between the hub and the sleeve, and a rotor magnet **128** radially external to the shaft, the sleeve, and the hub and both gaps.

The method of insulating the assembly against the magnetic flux is inherent in the structure taught by Neal.

With regards to claim **14**, Neal discloses that the fluid used in hydrodynamic bearings can be either a liquid or gas. Therefore, the gas could be air and the air is a substantially non-permeable material.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichiyama (US 6549366) in view of Ichiyama (US 6456458).

Ichiyama discloses the claimed invention but fails to disclose the grooves in the shaft. In '458 figure 5B, Ichiyama discloses the grooves formed in the shaft for the purpose of providing support against radial loads acting on the shaft.

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It would have been obvious to one skilled in the art at the time the invention was made to use the grooves disclosed by Ichiyama on '458 on the motor structure disclosed by Ichiyama '366 for the purpose of providing support against radial loads acting on the shaft.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neal in view of Ichiyama ('458).

Neal discloses the claimed invention but fails to disclose the grooves in the shaft. In '458 figure 5B, Ichiyama discloses the grooves formed in the shaft for the purpose of providing support against radial loads acting on the shaft.

It would have been obvious to one skilled in the art at the time the invention was made to use the grooves disclosed by Ichiyama on '458 on the motor structure disclosed by Neal for the purpose of providing support against radial loads acting on the shaft.

Allowable Subject Matter

10. Claims 7, 8 and 15-16 are allowed.

11. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

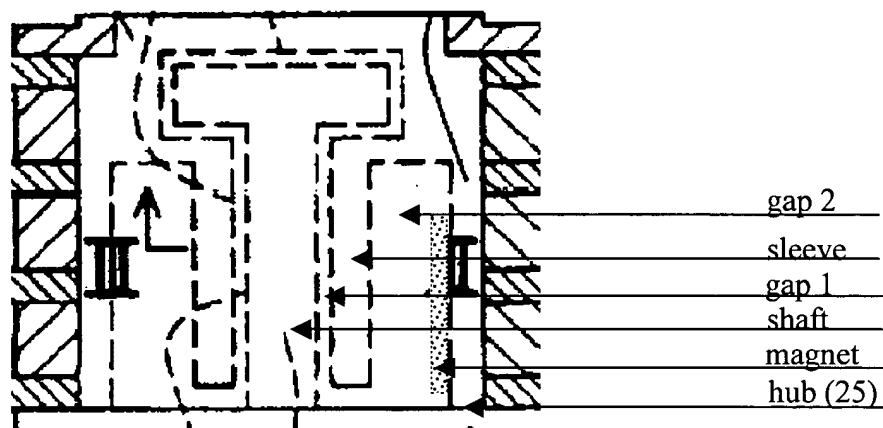
12. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach either alone or in combination the large gap filled with epoxy and the prior art fail to teach the gap being in the range of 200-300 microns.

Response to Arguments

13. Applicant's arguments filed on 1/12/04 have been fully considered but they are not persuasive.

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14. Applicants argument that there is only one gap disclosed in patent '366, the Examiner disagrees. In figure 2, Ichiyama shows a first gap between the shaft and the sleeve and a second gap between the sleeve and the hub. Applicants argument that the microgap exists between the shaft and the magnet, the Examiner disagrees. The magnets are located inside member 25, as Applicants acknowledge, but this does not mean that the gap is between the magnets and the shaft, but rather inside the member 25. As shown below, there is a gap between the sleeve and the hub.



Applicants argument that claim 1 recites the limitation that the second gap reduces magnetic flux leakage into the sleeve and a substantially negligible amount of flux crosses the first gap into the shaft. "Substantially negligible amount of flux" is a relative term. Applicants also argument that there is not a second gap, as discussed above, there is a gap between the sleeve and the hub. The claimed invention, as claimed in claims 1 and 12, does not distinguish from the prior art. Therefore, the rejection is proper and maintained.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

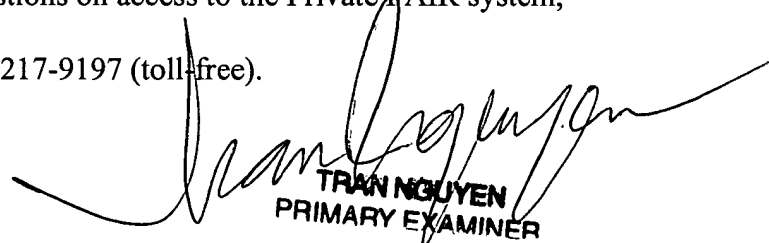
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaydi A. Aguirrechea whose telephone number is 571-272-2018. The examiner can normally be reached on M-Th 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAA
3/24/04


TRAN NGUYEN
PRIMARY EXAMINER